IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An optical disc apparatus for recording [[the]] information [[on]] onto an optical disc, comprising

an optical head device including a laser light emitting unit configured to radiate ~~for radiating~~ laser light [[to]] onto said optical disc, and a light detection unit illuminated by return light of the radiated laser light and configured to generate an electrical signal containing information components obtained from said optical disc based on ~~responsive to~~ the ~~illuminating~~ return light; and

a signal processing circuit configured to perform ~~performing~~ control for reproducing signals recorded on said optical disc or for recording signals [[on]] onto said optical disc[[,]] responsive to the electrical signal output from said optical head device;

said light detection unit including

a photoelectric converter unit divided into at least two portions along a direction corresponding to the radial direction of said optical disc;

a multiplication circuit configured to multiply ~~for multiplying~~ an electrical signal, generated by one of said two portions of the photoelectric converter unit, obtained by division in a direction corresponding to the radial direction of said optical disc, with a coefficient t; and

a differential circuit configured to calculate a ~~for calculating the~~ difference between an [[the]] electrical signal generated by the other of said two portions of the photoelectric converter unit obtained by division in the direction corresponding to the radial direction of said optical disc, and the electrical signal output from said multiplication circuit, to generate a radial push-pull signal[[;]].

wherein said coefficient t is ~~being~~ set to a value corresponding to a ratio of an average value of an electrical signal by return light illuminating said one of said two portions of said photoelectric converter unit and an average value of an electrical signal by return light illuminating said other of said two portions, or a ratio of said average value, sampled at a preset timing, of said electrical signal by return light illuminating said one of said two portions, and said average value, sampled at a preset timing, of said electrical signal by return light illuminating said other of said two portions ~~a ratio of the volume of return light illuminated on said one of said two portions of the photoelectric converter unit and the volume of return light illuminated on said other of said two portions of the photoelectric converter unit~~.

Claims 2-3 (Canceled).

Claim 4 (Currently Amended): The optical disc apparatus according to claim 1 [[3]] wherein said signal processing circuit adjusts said coefficient t responsive to an error rate of a signal contained in boundary components of a recording track of said optical disc.

Claim 5 (Currently Amended): The optical disc apparatus according to claim 1 [[3]] wherein said signal processing circuit adjusts said coefficient t responsive to an error rate of a signal contained in a wobble signal of said optical disc.

Claim 6 (Currently Amended): The optical disc apparatus according to claim 1 [[3]] wherein said signal processing circuit adjusts said coefficient t responsive to an error rate of a signal contained in a land pre-pit signal of said optical disc.

Claim 7 (Currently Amended): The optical disc apparatus according to claim 1 wherein said light detection unit comprises: ~~includes~~

a first amplifier circuit configured to amplify ~~for amplifying~~ an electrical signal generated by said one of said two portions of the photoelectric converter unit by an amplification factor related to the power of laser light illuminated on said optical disc for recording signals thereon, or to a rotational speed of said optical disc; and

a second amplifier circuit configured to amplify ~~for amplifying~~ the electrical signal generated by said other of said two portions of the photoelectric converter unit by said amplification factor[[;]],

wherein said multiplication circuit is configured to multiply ~~multiplying~~ the electrical signal output by said first amplifier circuit with a coefficient t[[;]], and

said differential circuit is configured to calculate a ~~calculating the~~ difference between the electrical signal output from said second amplifier circuit and the electrical signal output from said multiplication circuit to generate a radial push-pull signal.

Claim 8 (Currently Amended): A light detection unit for an optical head device configured to irradiate ~~for radiating~~ laser light onto [[to]] an optical disc for recording and/or reproducing signals for said optical disc, comprising:

a photoelectric converter unit divided into at least two portions along a direction corresponding to the radial direction of said optical disc;

a multiplication circuit configured to multiply ~~for multiplying~~ an electrical signal, generated by one of said two portions of said photoelectric converter unit obtained by division along a direction corresponding to the radial direction of said optical disc, with a coefficient t; and

a differential circuit configured to calculate ~~for calculating~~ a difference between an electrical signal generated by the other of said two portions of the photoelectric converter unit obtained by division in a direction corresponding to the radial direction of said optical disc, and an electrical signal output from said multiplication circuit, to generate a radial push-pull signal[[;]],

wherein said coefficient t is ~~being~~ set to a value corresponding to a ratio of an average value of an electrical signal by return light illuminating said one of said two portions of said photoelectric converter unit and an average value of an electrical signal by return light illuminating said other of said two portions, or a ratio of said average value, sampled at a preset timing, of said electrical signal by return light illuminating said one of said two portions, and said average value, sampled at a preset timing, of said electrical signal by return light illuminating said other of said two portions ~~a ratio of the light volume of return light illuminated on said one of said two portions of said photoelectric converter unit and the light volume of return light illuminated on said other of said two portions~~.

Claims 9-10 (Canceled).

Claim 11 (Currently Amended): The light detection unit for an optical head device according to claim 8 further comprising:

a first amplifier circuit configured to amplify ~~for amplifying~~ an electrical signal generated by said one of said two portions of the photoelectric converter unit by an amplification factor related to the power of laser light illuminated on said optical disc for recording signal thereon, or to a rotational speed of said optical disc; and

a second amplifier circuit configured to amplify ~~for amplifying~~ the electrical signal generated by said other of said two portions of the photoelectric converter unit by said amplification factor[[;]],

wherein said multiplication circuit is configured to multiply ~~multiplying~~ the electrical signal output by said first amplifier circuit with said coefficient t[[;]], and

said differential circuit is configured to calculate a ~~calculating the~~ difference between the electrical signal output from said second amplifier circuit and the electrical signal output from said multiplication circuit to generate a radial push-pull signal.

Claim 12 (Currently Amended): An optical head device comprising:

a laser light emitting unit configured to radiate ~~for radiating~~ laser light onto [[to]] said optical disc, and a light detection unit illuminated by return light of radiated laser light configured to generate an electrical signal containing information components obtained from said optical disc responsive to the ~~illuminating~~ return light;

said light detection unit including

a photoelectric converter unit divided into at least two portions along a direction corresponding to the radial direction of said optical disc;

a multiplication circuit configured to multiply ~~for multiplying~~ an electrical signal generated by one of said two portions of said photoelectric converter unit, obtained by division along a direction corresponding to the radial direction of said optical disc, with a coefficient t; and

a differential circuit configured to calculate ~~for calculating~~ a difference between an electrical signal generated by the other of said two portions of the photoelectric converter unit obtained by division in a direction corresponding to the radial direction of said

optical disc, and an electrical signal output from said multiplication circuit, to generate a radial push-pull signal[[;]],

wherein said coefficient t is ~~being~~ set to a value corresponding to a ratio of an average value of an electrical signal by return light illuminating said one of said two portions of said photoelectric converter unit and an average value of an electrical signal by return light illuminating said other of said two portions, or a ratio of said average value, sampled at a preset timing, of said electrical signal by return light illuminating said one of said two portions, and said average value, sampled at a preset timing, of said electrical signal by return light illuminating said other of said two portions ~~a ratio of the light volume of return light illuminated on said one of said two portions of said photoelectric converter unit and the light volume of return light illuminated on said other of said two portions~~.

Claim 13 (Canceled).

Claim 14 (Currently Amended): The optical head device according to claim 12 wherein said light detection unit comprises: ~~includes~~

a first amplifier circuit configured to amplify ~~for amplifying~~ an electrical signal generated by said one of said two portions of the photoelectric converter unit by an amplification factor related to the power of laser light illuminated on said optical disc for recording signals thereon, or to a rotational speed of said optical disc; and

a second amplifier circuit configured to amplify ~~for amplifying~~ the electrical signal generated by said other of said two portions of the photoelectric converter unit by said amplification factor[[;]],

wherein said multiplication circuit is configured to multiply ~~multiplying~~ the electrical signal output by said first amplifier circuit with said coefficient t[[;]], and

said differential circuit is configured to calculate a ~~calculating the~~ difference between the electrical signal output from said second amplifier circuit and the electrical signal output from said multiplication circuit to generate a radial push-pull signal.